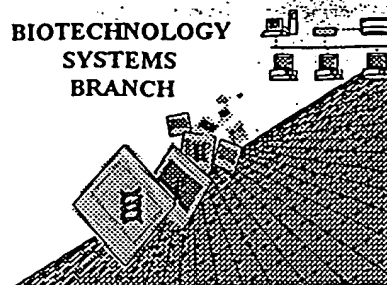
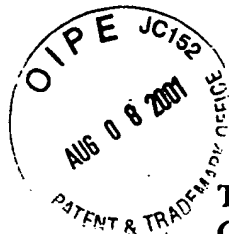


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BIOTECHNOLOGY  
SYSTEMS  
BRANCH



**RAW SEQUENCE LISTING**  
**ERROR REPORT**



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/827,937

Source: OIPE

Date Processed by STIC: 4-23-01

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

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**Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>



OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/827,937DATE: 04/23/2001  
TIME: 13:34:35Input Set : A:\seqlist-1488 1220003.txt  
Output Set: N:\CRF3\04232001\I827937.rawDoes Not Comply  
Corrected Diskette Needed

5 <110> APPLICANT: Li, Yi  
8 Ruben, Steven M.  
13 <120> TITLE OF INVENTION: Human G-Protein Coupled Receptors  
19 <130> FILE REFERENCE: 1488.1220003  
C--> 25 <140> CURRENT APPLICATION NUMBER: US/09/827,937  
C--> 28 <141> CURRENT FILING DATE: 2001-04-09  
32 <150> PRIOR APPLICATION NUMBER: 08/852,824  
35 <151> PRIOR FILING DATE: 1997-05-07  
40 <160> NUMBER OF SEQ ID NOS: 18  
46 <170> SOFTWARE: PatentIn Ver. 2.0  
52 <210> SEQ ID NO: 1  
55 <211> LENGTH: 2247  
58 <212> TYPE: DNA  
61 <213> ORGANISM: genomic →  
67 <220> FEATURE:  
70 <221> NAME/KEY: CDS  
73 <222> LOCATION: (226)..(1251)  
79 <400> SEQUENCE: 1  
82 gcacgaggaa cagaacactt tctcatgtcc agggtcagat tacaagagca ctcaagactt 60  
88 tactgacgaa aactcaggaa atctctatc acaaagaggt ttggcaacta aactaagaca 120  
94 ttaaaaggaa aataccagat gccactctgc aggttgcaat aactactact tactggatac 180  
100 attcaaacc cccagaatca acagttatca ggtaaccaac aagaa'atg caa gcc gtc 237  
103 Met Gln Ala Val  
106  
112 gac aat ctc acc tct gcg cct ggg aac acc agt ctg tgc acc aga gac 285  
115 Asp Asn Leu Thr Ser Ala Pro Gly Asn Thr Ser Leu Cys Thr Arg Asp  
118 5 10 15 20  
124 tac aaa atc acc cag gtc ctc ttc cca ctg ctc tac act gtc ctg ttt 333  
127 Tyr Lys Ile Thr Gln Val Leu Phe Pro Leu Leu Tyr Thr Val Leu Phe  
130 25 30 35  
136 ttt gtt gga ctt atc aca aat ggc ctg gcg atg agg att ttc ttt caa 381  
139 Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg Ile Phe Phe Gln  
142 40 45 50  
148 atc cgg agt aaa tca aac ttt att ttt ctt aag aac aca gtc att 429  
151 Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys Asn Thr Val Ile  
154 55 60 65  
160 tct gat ctt ctc atg att ctg act ttt cca ttc aaa att ctt agt gat 477  
163 Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys Ile Leu Ser Asp  
166 70 75 80  
172 gcc aaa ctg gga aca gga cca ctg aga act ttt gtg tgt caa gtt acc 525  
175 Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val Cys Gln Val Thr  
178 85 90 95 100  
184 tcc gtc ata ttt tat ttc aca atg tat atc agt att tca ttc ctg gga 573  
187 Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile Ser Phe Leu Gly  
190 105 110 115  
196 ctg ata act atc gat cgc tac cag aag acc acc agg cca ttt aaa aca 621  
199 Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg Pro Phe Lys Thr

Valid responses for &lt;213&gt;:

1- Genus species of organism

2- Unknown

3- Artificial sequence.

Unknown and  
artificial sequences  
must include <220>  
<223> features to  
explain the source  
of the genetic  
material in the  
sequence.

\*Note: please  
correct subsequent  
sequences in the  
listing which contain  
this error.

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/827,937

DATE: 04/23/2001  
 TIME: 13:34:35

Input Set : A:\seqlist-1488 1220003.txt  
 Output Set: N:\CRF3\04232001\I827937.raw

202		120		125		130		
208	tcc aac ccc	aaa aat ctc ttg ggg gct aag att ctc tct gtt gtc atc	669					
211	Ser Asn Pro	Lys Asn Leu Leu Gly Ala Lys Ile Leu Ser Val Val Ile						
214		135		140		145		
220	tgg gca ttc atg ttc tta ctc tct ttg cct aac atg att ctg acc aac	717						
223	Trp Ala Phe Met Phe Leu Leu Ser Leu Pro Asn Met Ile Leu Thr Asn							
226		150		155		160		
232	agg cag ccg aga gac aag aat gtg aag aaa tgc tct ttc ctt aaa tca	765						
235	Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser Phe Leu Lys Ser							
238	165		170		175		180	
244	gag ttc ggt cta gtc tgg cat gaa ata gta aat tac atc tgt caa gtc	813						
247	Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr Ile Cys Gln Val							
250		185		190		195		
256	att ttc tgg att aat ttc tta att gtt att gta tgt tat aca ctc att	861						
259	Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys Tyr Thr Leu Ile							
262		200		205		210		
268	aca aaa gaa ctg tac cgg tca tac gta aga acg agg ggt gta ggt aaa	909						
271	Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg Gly Val Gly Lys							
274		215		220		225		
280	gtc ccc agg aaa aag gtg aac gtc aaa gtt ttc att atc att gct gta	957						
283	Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile Ile Ile Ala Val							
286		230		235		240		
292	ttc ttt att tgt ttt gtt cct ttc cat ttt gcc cga att cct tac acc	1005						
295	Phe Phe Ile Cys Phe Val Pro Phe His Phe Ala Arg Ile Pro Tyr Thr							
298	245		250		255		260	
304	ctg agc caa acc cgg gat gtc ttt gac tgc act gct gaa aat act ctg	1053						
307	Leu Ser Gln Thr Arg Asp Val Phe Asp Cys Thr Ala Glu Asn Thr Leu							
310		265		270		275		
316	ttc tat gtg aaa gag agc act ctg tgg tta act tcc tta aat gca tgc	1101						
319	Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser Leu Asn Ala Cys							
322		280		285		290		
328	ctg gat ccg ttc atc tat ttt ttc ctt tgc aag tcc ttc aga aat tcc	1149						
331	Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser Phe Arg Asn Ser							
334		295		300		305		
340	ttg ata agt atg ctg aag tgc ccc aat tct gca aca tct ctg tcc cag	1197						
343	Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr Ser Leu Ser Gln							
346		310		315		320		
352	gac aat agg aaa aaa gaa cag gat ggt ggt gac cca aat gaa gag act	1245						
355	Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro Asn Glu Glu Thr							
358	325		330		335		340	
364	cca atg taaacaaatt aactaaggaa atatttcaat ctctttgtgt tcagaactcg	1301						
367	Pro Met							
373	ttaaagcaaa gcgctaagta aaaatattaa ctgacgaaga agcaactaag ttaataataa	1361						
379	tgactctaaa gaaacagaag attacaaaag caattttcat ttacctttcc agtatgaaaa	1421						
385	gctatcttaa aatatagaaa actaatctaa actgtagctg tattagcagc aaaacaaacg	1481						
391	acatccaatt gtcagtctgc atgcaaaact acacagaatt catgttttgg cagagttttg	1541						
397	gcaaaatgag taatcatata atattttactg taatttttaa aatacattat cgttcacaat	1601						
403	tttatttttt cataatcaac taaggaagaa cgatcaattg gatataatct tcttaccaaa	1661						
409	aatgatagtt aaaatgtata tatatcctag tcccctaacc aaatcctgac ctattgggat	1721						

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/827,937

DATE: 04/23/2001

TIME: 13:34:35

Input Set : A:\seqlist-1488 1220003.txt

Output Set: N:\CRF3\04232001\I827937.raw

415 acttataaaa atttaagtaa gtgggataca caaagaataa taactattaa cttttcatta 1781  
 421 ttagccaaaa acctaagga tttaaactaa ttgaaactgt atttgattgg acttaatttt 1841  
 427 ttatgtttat ttagaagata aagatttaag aagaccttta caataaagag aagaaatata 1901  
 433 gaagtcatta aaataaggag acttactttt atgacattct aatactaaaa aatatagaaa 1961  
 439 tatttcotta attctagaga aactagtttt actaattttt tacaacttca ataataccat 2021  
 445 cactgacact tacctttatt aattagcttc tagaaaatag ctgctaatta ggtaaatgaa 2081  
 451 cattttacct tagtgaaaaa aaattaatta aatatgatta caaagttgca cagcataact 2141  
 457 actgagagga aagtgtttga tctgtttgta attacttggt tgtattggtg tgtataaaat 2201  
 463 acaaattttac attaaactct aaatcattaa aaaaaaaaaa aaaaaa 2247

472 &lt;210&gt; SEQ ID NO: 2

475 &lt;211&gt; LENGTH: 342

478 &lt;212&gt; TYPE: PRT

481 <213> ORGANISM: genomic → see p. 1

487 &lt;400&gt; SEQUENCE: 2

490 Met Gln Ala Val Asp Asn Leu Thr Ser Ala Pro Gly Asn Thr Ser Leu  
 493 1 5 10 15  
 499 Cys Thr Arg Asp Tyr Lys Ile Thr Gln Val Leu Phe Pro Leu Leu Tyr  
 502 20 25 30  
 508 Thr Val Leu Phe Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg  
 511 35 40 45  
 517 Ile Phe Phe Gln Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys  
 520 50 55 60  
 526 Asn Thr Val Ile Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys  
 529 65 70 75 80  
 535 Ile Leu Ser Asp Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val  
 538 85 90 95  
 544 Cys Gln Val Thr Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile  
 547 100 105 110  
 553 Ser Phe Leu Gly Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg  
 556 115 120 125  
 562 Pro Phe Lys Thr Ser Asn Pro Lys Asn Leu Leu Gly Ala Lys Ile Leu  
 565 130 135 140  
 571 Ser Val Val Ile Trp Ala Phe Met Phe Leu Leu Ser Leu Pro Asn Met  
 574 145 150 155 160  
 580 Ile Leu Thr Asn Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser  
 583 165 170 175  
 589 Phe Leu Lys Ser Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr  
 592 180 185 190  
 598 Ile Cys Gln Val Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys  
 601 195 200 205  
 607 Tyr Thr Leu Ile Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg  
 610 210 215 220  
 616 Gly Val Gly Lys Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile  
 619 225 230 235 240  
 625 Ile Ile Ala Val Phe Phe Ile Cys Phe Val Pro Phe His Phe Ala Arg  
 628 245 250 255  
 634 Ile Pro Tyr Thr Leu Ser Gln Thr Arg Asp Val Phe Asp Cys Thr Ala  
 637 260 265 270  
 643 Glu Asn Thr Leu Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/827,937

DATE: 04/23/2001

TIME: 13:34:35

Input Set : A:\seqlist-1488 1220003.txt

Output Set: N:\CRF3\04232001\I827937.raw

```

646          275          280          285
652 Leu Asn Ala Cys Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser
655          290          295          300
661 Phe Arg Asn Ser Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr
664 305          310          315          320
670 Ser Leu Ser Gln Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro
673          325          330          335
679 Asn Glu Glu Thr Pro Met
682          340
691 <210> SEQ ID NO: 3
694 <211> LENGTH: 1637
697 <212> TYPE: DNA
700 <213> ORGANISM: genomic → see p. 1
706 <220> FEATURE:
709 <221> NAME/KEY: CDS
712 <222> LOCATION: (50)..(1201)
718 <400> SEQUENCE: 3
721 ggcacgagcc caccctgcgt cgggcctcag tcagcccccg ggggaggcc atg aac gcc 58
724                                     Met Asn Ala
727                                     1
733 acg ggg acc ccg gtg gcc ccc gag tcc tgc caa cag ctg gcg gcc ggc 106
736 Thr Gly Thr Pro Val Ala Pro Glu Ser Cys Gln Gln Leu Ala Ala Gly
739          5          10          15
745 ggg cac agc cgg ctc att gtt ctg cac tac aac cac tcg ggc cgg ctg 154
748 Gly His Ser Arg Leu Ile Val Leu His Tyr Asn His Ser Gly Arg Leu
751 20          25          30          35
757 gcc ggg cgc ggg ggg ccg gag gat ggc ggc ctg ggg gcc ctg cgg ggg 202
760 Ala Gly Arg Gly Gly Pro Glu Asp Gly Gly Leu Gly Ala Leu Arg Gly
763          40          45          50
769 ctg tcg gtg gcc gcc agc tgc ctg gtg gtg ctg gag aac ttg ctg gtg 250
772 Leu Ser Val Ala Ala Ser Cys Leu Val Leu Glu Asn Leu Leu Val
775          55          60          65
781 ctg gcg gcc atc acc agc cac atg cgg tcg caa cgc tgg gtc tac tat 298
784 Leu Ala Ala Ile Thr Ser His Met Arg Ser Gln Arg Trp Val Tyr Tyr
787          70          75          80
793 tgc ctg gtg aac att acg atg agt gac ctg ctc acg ggc gcg gcc tac 346
796 Cys Leu Val Asn Ile Thr Met Ser Asp Leu Leu Thr Gly Ala Ala Tyr
799          85          90          95
805 ctg gcc aac gtg ctg ctg tcg ggg gcc cgc acc ttc cgt ctg gcg ccc 394
808 Leu Ala Asn Val Leu Leu Ser Gly Ala Arg Thr Phe Arg Leu Ala Pro
811 100          105          110          115
817 gcc cag tgg ttc cta cgg aag ggc ctg ctc ttc acc gcc ctg gcc gcc 442
820 Ala Gln Trp Phe Leu Arg Lys Gly Leu Leu Phe Thr Ala Leu Ala Ala
823          120          125          130
829 tcc acc ttc agc ctg ctc ttc act gca ggg ttg cgc ttt gcc acc atg 490
832 Ser Thr Phe Ser Leu Leu Phe Thr Ala Gly Leu Arg Phe Ala Thr Met
835          135          140          145
841 gtg cgg ccg gtg gcc gag agc ggg gcc acc aag acc agc cgc gtc tac 538
844 Val Arg Pro Val Ala Glu Ser Gly Ala Thr Lys Thr Ser Arg Val Tyr

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## RAW SEQUENCE LISTING

DATE: 04/23/2001

PATENT APPLICATION: US/09/827,937

TIME: 13:34:35

Input Set : A:\seqlist-1488 1220003.txt

Output Set: N:\CRF3\04232001\I827937.raw

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847      150      155      160
853 ggc ttc atc ggc ctc tgc tgg ctg ctg gcc gcg ctg ctg ggg atg ctg 586
856 Gly Phe Ile Gly Leu Cys Trp Leu Leu Ala Ala Leu Leu Gly Met Leu
859      165      170      175
865 cct ttg ctg ggc tgg aac tgc ctg tgc gcc ttt gac cgc tgc tcc agc 634
868 Pro Leu Leu Gly Trp Asn Cys Leu Cys Ala Phe Asp Arg Cys Ser Ser
871 180      185      190      195
877 ctt ctg ccc ctc tac tcc aag cgc tac atc ctc ttc tgc ctg gtg atc 682
880 Leu Leu Pro Leu Tyr Ser Lys Arg Tyr Ile Leu Phe Cys Leu Val Ile
883      200      205      210
889 ttc gcc ggc gtc ctg gcc acc atc atg ggc ctc tat ggg gcc atc ttc 730
892 Phe Ala Gly Val Leu Ala Thr Ile Met Gly Leu Tyr Gly Ala Ile Phe
895      215      220      225
901 cgc ctg gtg cag gcc agc ggg cag aag gcc cca cgc cca gcg gcc cgc 778
904 Arg Leu Val Gln Ala Ser Gly Gln Lys Ala Pro Arg Pro Ala Ala Arg
907      230      235      240
913 cgc aag gcc cgc cgc ctg ctg aag acg gtg ctg atg atc ctg ctg gcc 826
916 Arg Lys Ala Arg Arg Leu Leu Lys Thr Val Leu Met Ile Leu Leu Ala
919      245      250      255
925 ttc ttg gtg tgc tgg gga cca ctc ttc ggg ctg ctg ctg gcc gac gtc 874
928 Phe Leu Val Cys Trp Gly Pro Leu Phe Gly Leu Leu Leu Ala Asp Val
931 260      265      270      275
937 ttt ggc tcc aac ctc tgg gcc cag gag tac ctg cgg ggc atg gac tgg 922
940 Phe Gly Ser Asn Leu Trp Ala Gln Glu Tyr Leu Arg Gly Met Asp Trp
943      280      285      290
949 atc ctg gcc ctg gcc gtc ctc aac tgc gcg gtc aac ccc atc atc tac 970
952 Ile Leu Ala Leu Ala Val Leu Asn Ser Ala Val Asn Pro Ile Ile Tyr
955      295      300      305
961 tcc ttc cgc agc agg gag gtg tgc aga gcc gtg ctc agc ttc ctc tgc 1018
964 Ser Phe Arg Ser Arg Glu Val Cys Arg Ala Val Leu Ser Phe Leu Cys
967      310      315      320
973 tgc ggg tgt ctc cgg ctg ggc atg cga ggg ccc ggg gac tgc ctg gcc 1066
976 Cys Gly Cys Leu Arg Leu Gly Met Arg Gly Pro Gly Asp Cys Leu Ala
979      325      330      335
985 cgg gcc gtc gag gct cac tcc gga gct tcc acc acc gac agc tct ctg 1114
988 Arg Ala Val Glu Ala His Ser Gly Ala Ser Thr Thr Asp Ser Ser Leu
991 340      345      350      355
997 agg cca agg gac agc ttt cgc gcc tcc cgc tgc ctc agc ttt cgg atg 1162
1000 Arg Pro Arg Asp Ser Phe Arg Gly Ser Arg Ser Leu Ser Phe Arg Met
1003      360      365      370
1009 cgg gag ccc ctg tcc agc atc tcc agc gtg cgg agc atc tgaagttgca 1211
1012 Arg Glu Pro Leu Ser Ser Ile Ser Ser Val Arg Ser Ile
1015      375      380
1021 gtcttgctgt tggatggtgc aaccaccggg tgcgtgccag gcaggccctc ctggggtaca 1271
1027 ggaagctgtg tgcacgcaac ctgcctctgt atggggagca gggaacggga caggcccca 1331
1033 tggacttgcc cgggtggctc tcggggcttc tgacgccata tggacttgcc cattgcctat 1391
1039 ggctcaccct ggacaaggag gcaaccaccc cacctccccg taggagcaga gagcaccctg 1451
1045 gtgtgggggc gagtgggttc cccacaaccc cgcttctgtg tgattctggg gaagtcccg 1511
1051 cccctctctg ggcctcagta gggctccag gctgcaagg gtggactgtg ggatgcatgc 1571

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/827,937

DATE: 04/23/2001

TIME: 13:34:36

Input Set : A:\seqlist-1488 1220003.txt  
Output Set: N:\CRF3\04232001\I827937.raw

L:25 M:270 C: Current Application Number differs, Replaced Application Number  
L:28 M:271 C: Current Filing Date differs, Replaced Current Filing Date